health institutions of Tigray Region, Ethiopia. **METHODS:** A health institution based quantitative and qualitative cross-sectional study was conducted among 845 pregnant women and 72 healthcare providers, from March to June 2012. The sample size was divided among twelve health facilities proportional to the total number of pregnant mothers in the facilities and selected by systematic sampling technique. Quantitative data were collected by trained data collectors through face-to-face interview of pregnant mothers using pre-tested, semi-structured questionnaire. In-depth interviews with healthcare providers and 11 focus group discussions of 108 clients were used to collect qualitative data. Logistic regression test was employed to assess determinants of client satisfaction. **RESULTS:** 702 (83.1%) of the pregnant women were tested for HIV after pre-counseling; 1.6% of which were positive. Average client's waiting and counseling time were found to be 26.4 minutes and 10.7 minutes, respectively. 48% of PMTCT service recipient mothers reported being satisfied with the service. The results of the qualitative study indicated that major barriers for PMTCT implementation were unfavorable attitude toward PMTCT, distance of health facilities, loss to follow up and non-adherence. Repeatedly mentioned health professionals related barriers were lack of on job training to update themselves and absence of incentive for the additional workload. After adjusting for independent variables, waiting time of longer than 15 minutes (AOR 2.32, 95%CI 1.53-4.78) was found to be associated with lesser clients' satisfaction. **CONCLUSIONS:** Overall quality of PMTCT service was found to be low in terms of waiting time length, duration of stay with healthcare providers and clients' satisfaction. Giving trainings and incentivizing healthcare providers, educating clients and improving the accessibility of service would help to minimize PMTCT implementation barriers thereby contributing to better service quality.

PHS170

QUALITY OF CARE FOR CHILDHOOD ATTENTION DEFICIT/HYPERACTIVITY DISORDER: A RETROSPECTIVE ANALYSIS OF MISSISSIPPI MEDICAID PROGRAM

Suryavanshi M[1], Banahan III B[2], Hardwick SP[3], Clark JP[3]
[1]*Univeristy of Mississippii, Oxford, MS, USA,* [2]*University of Mississippi, University, MS, USA,* [3]*Mississippi Division of Medicaid, Jackson, MS, USA*

OBJECTIVES: The Centers for Medicare and Medicaid (CMS) core set of quality measures for use in Medicaid and the Children's Health Insurance Program (CHIP) includes a measure for follow-up care within 30 days of a child initiating treatment with an attention deficit disorder (ADHD) medication. The objective of this study is to document the proportion of children in Mississippi Medicaid who received a follow-up visit within 30 days of initiating a stimulant for ADHD. **METHODS:** A retrospective analysis was conducted using Mississippi Medicaid medical claims, pharmacy claims and beneficiary eligibility data for the time period July 2012 to December 2013. 2013 was the observation year for initiation of stimulant therapy. Inclusion criteria were age < 21 at time of initiation of therapy, continuously enrolled for 180 days prior and 30 days post prescription start index date (PSID), and PSID occurred during observation year. Beneficiaries were considered to have received follow-up if a claim for an office visit occurred within 30 days of the PSID. **RESULTS:** 6,354 children met the inclusion criteria and 3,769 (59.3%) had a follow up visit within 30 days. The prescribing physicians were primary care physicians (PCPs) for 49.5% of patients, psychiatrists for 23.2%, and other types of prescribers 27.3% of the time. PCPs had the lowest rate of follow up visits; 51.0% compared to 55.6% for psychiatrists and 54.1% for other prescribers. There was considerable variability in rates for MDs in each provider type. **CONCLUSIONS:** The Mississippi rate of 59% follow up is above the national average of 46% reported in the 2014 CMS Annual report on child quality measurement for FFY 2013. Although PCPs had the lowest rate, all provider types needed improvement on this measure. Educational interventions are needed to improve the state's performance on this measure.

PHS171

DISEASE-SPECIFIC DISTRIBUTION OF HEALTH CARE QUALITY MEASURES IN THE UNITED STATES

Nicholson GL, Halbert RJ
ICON plc, El Segundo, CA, USA

OBJECTIVES: Quality improvement initiatives in US health care increasingly focus on physician and hospital performance against rigorous, evidence-based quality measures (QMs). Over the last decade, the universe of QMs has grown exponentially and continues to grow. We examined the landscape of current QMs across multiple diseases to better understand the evolving nature of quality measurement. **METHODS:** Publicly available databases of QMs were searched to identify indicators in a wide range of disease states over a period of 3 years. All identified QMs were bundled by disease area and plotted on a landscape matrix, assessing the maturity of quality science and burden of disease (based on prevalence, public health impact, and cost). The distribution of QMs in the matrix was validated through in-depth interviews with payers (n=20) and providers (n=7). **RESULTS:** QMs in disease areas with low disease burden and immature quality science (e.g., schizophrenia) are rare or non-existent. Disease areas with significant disease burden but less developed quality science (e.g., oncology) have relatively few QMs in adoption but are rapidly adding new QMs and refining current QMs. High-burden diseases with mature quality science (e.g., diabetes) have multiple QMs that are well-entrenched and stable, with relatively less addition or refinement. Findings from the landscape matrix exercise were validated through interviews with payers and provider groups, focusing on their current and future quality improvement agendas, and quality activities linked to incentives. **CONCLUSIONS:** Implementation of quality measures varies by disease state characteristics, including public health impact and the maturity of measurement science. A tight focus on producing new metrics may not be the best way to advance quality in every area. For some diseases, efforts may be more productive if directed toward strengthening the quality infrastructure. Examples include improving measurement capability, establishing quality domains, or standardizing clinical practice guidelines.

PHS172

MEASURING LOW-VALUE HEALTH SERVICES USING HEALTH INSURANCE CLAIMS DATA

Tong J[1], Kralewski J[1], Dowd B[1], Carlin C[2]
[1]*University of Minnesota, Minneapolis, MN, USA,* [2]*Medica Research Institute, Minneapolis, MN, USA*

OBJECTIVES: Overuse of health services is increasingly recognized as a problem that affects both quality and costs of health care. An important next step to measuring overuse is identification of appropriate datasets. Our study evaluated the potential of using health insurance claims data to document the use and associated spending of services identified by clinical guidelines as having low-value. **METHODS:** Claims data from a not-for-profit Upper Midwest health insurance plan serving 1.6 million enrollees in 2011 were analyzed to determine the potential for quantifying the inappropriate use of four low-value services endorsed by the Choosing Wisely initiative. The services included: 1) Imaging studies for acute non-specific low back pain, 2) Pap-test cervical cancer screening for women younger than 21 years, 3) Prostate-specific antigen screening for prostate cancer for men older than 75 years, and 4) Screening colonoscopy for adults older than 75 years. **RESULTS:** Only 4% of the patients with low back pain received an MRI within six weeks of diagnosis. PSA tests for men over 75 years old were somewhat higher (8%), but the unit cost for these procedures was only $27. Three percent of enrollees over 75 years old had colonoscopies and inappropriate Pap tests were about 2%. **CONCLUSIONS:** While we have been able to demonstrate how a private sector health plan can monitor the use of low-value services. The savings that this health plan can achieve is less than expected and less than other recent national estimates. Consequently the use rates appear to be much higher in other geographic locations where there are fewer large multi-specialty group practices with extensive quality assurance programs in place. Health plan claims data capture services for patients regardless of where the care is obtained. We can analyze the influence of patients and providers characteristics associated with low-value services and informed clinical and policy interventions can be developed.

PHS173

INITIATION AND EVALUATION OF CLINICAL PHARMACY SERVICES TO SURGICAL WARD IN A SOUTH INDIAN TERTIARY CARE TEACHING HOSPITAL

Adepu R, Sharon S
JSS University, Mysore, India

OBJECTIVES: To assess the usefulness of clinical pharmacy services in surgery department of a tertiary care teaching hospital in South India **METHODS:** With initial briefing about clinical pharmacy services and consent from the Chair, Surgery department, Clinical Pharmacy Services were offered for a period of six months. The services offered were drug information, detection, monitoring and reporting of adverse drug reactions, patient counseling and therapeutic interventions. Usefulness of the services was evaluated at the end of the study period using descriptive statistics. **RESULTS:** During the study period, a total of 526 clinical pharmacy services were provided to the surgery department. Among them 38.02% account for adverse drug reactions followed by 27.19% drug information, 22.05% patient counseling and 12.73% of pharmacist interventions for rationalizing drug therapy. Among the ADRs, vomiting (29.50%), diarrhea (17.50%), neutropenia (16.50%) were the major ADRs detected. Majority drug information provided was chemotherapy protocols (68.53%) followed by dosage and administration of drugs (13.98%). Counselling services was offered to patients with diabetic foot infections (27.58%), cellulitis (21.55%), appendicitis (12.93%), and pancreatitis (10.34%). Pharmacist intervention was found to be highest for untreated indication (46.26%) followed by dosage adjustment in renal impairement (14.92%), and dosage adjustment in hepatic impairement (11.94%). The overall satisfaction rate was found to be 8 out of 10 scale. **CONCLUSIONS:** Clinical pharmacy services offered to surgery department helped in improving overall patient care and clinician satisfaction

PHS174

OUTPATIENT FOLLOW-UP VISITS AFTER HOSPITAL DISCHARGE FOR MENTAL ILLNESS AND IMPLICATIONS FOR RE-ADMISSIONS

Lin J[1], Muser E[2], Munsell M[1], Menzin J[1]
[1]*Boston Health Economics, Inc., Waltham, MA, USA,* [2]*Janssen Scientific Affairs, LLC, Titusville, NJ, USA*

OBJECTIVES: Follow-up after hospitalization for mental illness is a standard HEDIS (Healthcare Effectiveness Data and Information Set) quality indicator that may affect risk of relapse. This study evaluated rates of follow-up visits and implications for re-admissions for patients with schizophrenia or bipolar disorder using administrative claims data. **METHODS:** A cross-sectional analysis of Optum Clinformatics data (1/1/2013–12/31/2013) was completed for two cohorts – schizophrenia (with or without bipolar) and bipolar only. Schizophrenia patients were required to have ≥1 inpatient or ≥2 outpatient claims for schizophrenia and ≥1 antipsychotic medication claim. Bipolar patients were required to meet the same criteria and also be≥18 years old. Patients were identified as having follow-up after a psychiatric-related hospitalization if they had an outpatient visit with a psychiatric diagnosis within 7 days of discharge of each psychiatric hospitalization they had in the analysis period. Logistic regression analysis was undertaken to assess the effects of a 7-day outpatient follow-up visit on likelihood of readmission, controlling for age, sex, substance abuse, other psychosis, antipsychotic MPR, and use of antidepressants, anxiolytics, anticonvulsants, and mood altering drugs. **RESULTS:** The schizophrenia cohort (N=4,164) had mean (SD) age of 36.9 years (15.6), 51.2% had other psychosis, and 43.2% had a psychiatric hospitalization. The bipolar cohort (N=21,768) had mean (SD) age of 40.0 years (13.1), 40.0% had other psychosis, and 28.0% had a psychiatric hospitalization. Among patients with ≥1 psychiatric hospitalization, 30.3% and 32.9% had outpatient follow-up visits within 7 days in the schizophrenia and bipolar cohorts, respectively. Using multivariate analysis, patients with follow-up within 7 days of discharge had a >50% reduction in likelihood of 30-day re-admission in both cohorts (Schizophrenia: OR=0.40; 95% CI=0.31-0.51; p<0.0001 and Bipolar: OR=0.46;

95% CI=0.41-0.52; p<0.0001). **CONCLUSIONS:** Outpatient follow-up within 7 days after hospitalization for mental illness was associated with statistically significant lower likelihood of 30-day re-admission.

PHS175
DECREASING EBM ORDER SET REVIEW AND APPROVAL CYCLE TIME
Castree KL, Cinciripini CL
Hospital Sisters Health System, Belleville, IL, USA
OBJECTIVES: Problems were lack of a coordinated approach to review and approval of order sets across the 4-hospital division; lack of consistent formal review process; wide variability in utilization of order sets, and therefore opportunities for errors and misalignment with regulatory compliance. Order set review and approval cycle time (defined as from the time an order set is drafted or received from the system level to when the approval bodies have approved it and it is ready for build, QA, and implementation) was also lengthy, impacting key stakeholder satisfaction and deployment of order sets for Computerized Physician Order Entry (CPOE). Objectives were to create one improved process for all four hospitals within the division, with 100% of new order sets compliant with the improved process going forward, process cycle time decreased to less than 60 days initially, and an increase in staff understanding of terms. **METHODS:** Methods utilized to improve the process included Lean Six Sigma tools such as project charter, Voice of the Customer (VOC), stakeholder analysis, communication plans, SIPOC, elevator speeches, project work plan, Value Stream Mapping of the current and future processes, data definitions and collection plan, data analysis including XmR control charts and capability analyses, fishbone/cause and effect diagram, Improvement Plan, Control Plan, and computer-based learning of order set terminology. **RESULTS:** Following successful phased implementation of the improved process, results were a decrease in cycle time from an average of 77.1 days at baseline to an average of 18.1 days in the post-improvement data collection period. **CONCLUSIONS:** In addition to decreased cycle time, the benefits of an improved process to review and approve order sets include decreased colleague time spent on the process, increased colleague understanding of terms and process due to developed education, increased goodwill with physicians due to more timely approval of requested order sets, potential decrease in regulatory issues and increase in quality of care, and improved CPOE adoption.

PHS176
PATIENT VALUATION OF DIFFERENT APPROACHES TO MENTAL HEALTH AND SUBSTANCE USE DISORDER TREATMENT
Epstein AJ[1], Barry CL[2], Fiellin DA[3], Busch SH[3]
[1]*University of Pennsylvania, Philadelphia, PA, USA,* [2]*Johns Hopkins University, Baltimore, MD, USA,* [3]*Yale University, New Haven, CT, USA*
OBJECTIVES: Treatment rates for mental health and substance use disorder (MH/SUD) conditions are low in the U.S. We assessed consumers' monetary valuation of primary care and collaborative care models for treating MH/SUD relative to usual care as a potential strategy for improving treatment rates. **METHODS:** We conducted a national, survey-embedded randomized vignette experiment of individuals with untreated MH/SUD in 2013. 58,928 adults were screened online and categorized as meeting criteria for either drug abuse (N=418) or alcohol abuse (N=698) based on DSM-IV criteria, or a mental health disorder based on a positive K6 score (N=1,030). The 2,146 participants were randomized to view one of three treatment vignettes: usual care (N=726), primary care (N=697), or collaborative care (N=723). Participants were asked whether they would be willing to enter treatment first if it were free to them, and then if they had to pay (for those initially indicating they were willing, randomly assigned as $10, $30 or $50) or were paid (for those initially indicating they were not willing, randomly assigned in $5 increments between $5 and $25). Responses were aggregated to calculate, for each treatment approach, an inverse demand function (i.e., proportion of all participants willing to enter treatment at each price point). After adjusting for MH/SUD condition, we fit linear regression lines through the inverse demand curves. Participants' average incremental value was calculated as the horizontal distance between the linearized inverse demand functions. **RESULTS:** Respondents valued primary care over usual care by $9.00 (95% confidence interval [CI]: $2.97, $15.04; p=0.003), and they valued collaborative care over usual care by $5.85 (95% CI: -$0.14, $11.85; p=0.056). **CONCLUSIONS:** Our results suggest that low treatment rates for MH/SUD may be addressed by increasing the availability of primary care and collaborative care treatment models, which are somewhat more appealing to consumers than usual care.

PHS178
HOSPITAL COST AND QUALITY TRENDS BEFORE AND AFTER ACO ADOPTION
Cutler E[1], Henke RE[1], Marder WD[1], Karaca Z[2], Wong H[2]
[1]*Truven Health Analytics, Cambridge, MA, USA,* [2]*Agency for Healthcare Research and Quality, Rockville, MD, USA*
OBJECTIVES: Providers who have had favorable cost and quality trends may be more likely to form Accountable Care Organizations (ACOs) because they expect to profit from changes that are already underway within their organization. We examine trends in hospital cost per discharge and in-hospital mortality rates among hospitals that formed ACOs and those that did not, incorporating several years of data preceding ACO formation. **METHODS:** We compared growth rates in cost per discharge and in-hospital mortality rates for select conditions. Data were from 2008 to 2011 (pre-ACO) and 2011 to 2012 (post-ACO) for hospitals that did and did not implement ACOs. We also explored whether there were distinct trends based on ACO leadership structure. **RESULTS:** Between 2008 and 2011, the average rate of growth in cost per discharge for hospitals that adopted ACOs was less than one-third of the rate among hospitals that remained unaffiliated (0.59% vs 2.02%). Among ACOs in which the hospital assumed a leadership role, mean cost per discharge declined during the pre-ACO period at an average rate of 0.55% for hospital-led ACOs and 1.52% for jointly-led ACOs. Cost per discharge during the post-ACO period grew at a rate of 1.99% among ACO hospitals and 1.02% among non-ACO hospitals. Hospital-led ACOs experienced a 1.95% increase in cost per discharge between 2011 and 2012, while cost per discharge among jointly-led ACOs fell by only 1.27%. Analysis of in-hospital mortality rates did not reveal persistent trend differences. **CONCLUSIONS:** Hospitals that adopted the ACO model had more favorable cost trends between 2008 and 2011 than hospitals that did not adopt the model, which suggests non-random selection of providers opting to participate in ACO initiatives. In the post-ACO adoption period, hospitals that were part of jointly-led ACOs had the lowest cost growth, suggesting that this ACO structure may be the most effective.

PHS179
READMISSION PATTERNS IN MEDICARE BENEFICIARIES HOSPITALIZED FOR HEART FAILURE
Kilgore M[1], Sharma P[1], Patel H[2], Maya J[2], Kielhorn A[2]
[1]*University of Alabama at Birmingham, Birmingham, AL, USA,* [2]*Amgen, Thousand Oaks, CA, USA*
OBJECTIVES: Determine 30-day, 60-day and 90-day readmission pattern in patients hospitalized for heart failure (HF). **METHODS:** A 5% (n=3,493,434) national sample of Medicare beneficiaries was used to assess the frequency of all-cause readmission following an HF hospitalization. The data were restricted to individuals enrolled in fee-for-service Medicare (not in Medicare Advantage) who were hospitalized at least once with a primary diagnosis of HF between July 1, 2005 and December 31, 2011. For all HF hospitalizations observed during the study period, 30-, 60-, and 90-day all-cause readmission rates were calculated. For those hospitalizations that were followed by subsequent admissions, the median time to readmission was also calculated. **RESULTS:** During the study period, 82,825 individuals experienced a total of 134,328 HF hospitalizations. For those 134,328 episodes, 29,998 (22.3%) experienced all-cause readmission within 30 days of discharge. The median time to readmission was 14 days. The 60-day readmission rate increased to 33.3% (n=44,720). The results indicated that 40.2% of the episodes experienced readmission within 90-days and the median time to 90-day readmission was 37 days. **CONCLUSIONS:** Individuals hospitalized for HF are frequently readmitted. Approximately 1 in 4 hospitalizations will be followed by a readmission within 30 days, of which half would occur within 2 weeks.

DISEASE-SPECIFIC STUDIES

NEUROLOGICAL DISORDERS – Clinical Outcomes Studies

PND1
EFFECTIVENESS OF PHARMACOTHERAPY IN CHILDREN WITH SYMPTOMATIC EPILEPSY
Bhardwaj A[1], Bansal D[1], Azad C[2]
[1]*National Institute of Pharmaceutical Education and Research, Mohali, India,* [2]*Government Medical College and Hospital, Chandigarh, India*
OBJECTIVES: Majority of the studies on epilepsy have been done on adults and few studies are available on children with symptomatic epilepsy (SE). This study aims to fill this gap by analyzing the effectiveness of anti epileptic drug (AED) therapy in children with SE. **METHODS:** Study was conducted in pediatric outpatient neurology clinic of public tertiary care hospital. Children aged 2-18 undergoing AED treatment ≥ 3 months and diagnosed with SE were included. Effectiveness parameters included; complete seizure remission (CSR) for 2 years and adverse drug reactions (ADRs). Those children who achieved CSR for 2 years with normalization of electroencephalogram were eligible to stop AED treatment. Children were followed for 2 years. **RESULTS:** 123 children who completed the follow up were included; 73 (59%) were boys and mean (SD) age of children was 8.48±0.43 yrs. The major cause was Neurocysticercosis (NCC) in 77 (63%), followed by cryptogenic epilepsy 25 (20%), birth asphyxia 7 (6%), infection 4 (3%), congenital structural defects 3 (3%) tuberculoma 3 (2.4%) and stroke and hypocalcemia in 2 (1.6%) children each. 79 children (64%) were on monotherapy. 80 (65%) were prescribed phenytoin, 25 (20.3%) sodium valproate and 18 (15%) carbamazepine. 70 (57%) children were prescribed albendazole-prednisolone. At follow-up, 82 (67%) children had CSR but AED could be stopped in 62 (50%) only. ADRs were reported in 27 (22%) children. **CONCLUSIONS:** NCC is the major cause of symptomatic epilepsy in North India. The pharmacotherapy, primarily being phenytoin is well tolerated and efficacious in children with SE. Though two-third of the children had CSR only 50% were eligible to stop AED treatment. This study could serve as the basis to determine how the treatment of SE differs from idiopathic Epilepsy and whether or not a different approach is required to treat children.

PND2
COMPARATIVE STUDY OF THE INFLUENCE OF BIAPENEM AND MEROPENEM ON VALPROIC ACID BLOOD CONCENTRATION
Tang L
Suzhou Municipal Hospital, Suzhou, China
OBJECTIVES: Several studies have described a remarkable interaction between Meropenem and Valproic acid (VPA). However, there's no analysis has been conducted evaluating the influence of different carbapenems on VPA blood level. We sought to analyze the influence of Biapenem on VPA blood concentration and the risk of seizures. **METHODS:** We retrospectively collected the patients who concomitant administrated of VPA and Biapenem, Meropenem as the control group::Biapenem 37 cases and Meropenem 48 cases. Recorded the information as follows: general clinical data, medication, VPA concentration, seizures and treatment and so on. **RESULTS:** Both of Biapenem and Meropenem significantly decreased the VPA blood level . The lowest concentrations in Biapenem group were higher than Meropenem group(P= 0.046). The mean decrease of VPA level in Biapenem group was also less than Meropenem group (70.65±9.64% vs 78.83±8.78%,P=0.01). There were six patients treated with Biapenem and Meropenem at different times of infection during taken the VPA. The low-